

Name: _____ Class: _____ Date: _____

Algebra II GHP

Practice 6-3A: Completing the Square *E.P.*

A. Solve each equation by factoring the perfect square trinomial and then taking square roots.

1. $x^2 + 6x + 9 = 1$

2. $x^2 - 4x + 4 = 100$

3. $x^2 - 2x + 1 = 4$

4. $x^2 + 8x + 16 = \frac{16}{9}$

5. $4x^2 + 4x + 1 = 49$

6. $9x^2 - 12x + 4 = 16$

B. Find the value that completes the square in each expression. Then factor the expression.

7. $x^2 + 4x + \underline{\hspace{1cm}}$

8. $x^2 - 24x + \underline{\hspace{1cm}}$

9. $x^2 + 20x + \underline{\hspace{1cm}}$

10. $x^2 - 16x + \underline{\hspace{1cm}}$

11. $x^2 + 6x + \underline{\hspace{1cm}}$

12. $x^2 - 3x + \underline{\hspace{1cm}}$

13. $x^2 - 7x + \underline{\hspace{1cm}}$

14. $x^2 + 9x + \underline{\hspace{1cm}}$

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Algebra II GHP

Practice 6-3B: Solving Equations by Completing the Square

Solve each equation by completing the square.

1. $x^2 - 6x = 27$

2. $x^2 - 10x = 24$

3. $x^2 - 8x - 9 = 0$

4. $x^2 - 34x - 33 = 2$

5. $x^2 + 8x + 5 = 7$

6. $x^2 + 22x = 23$

7. $2x^2 + 4x - 28 = 0$

8. $4x^2 + 4x = 3$

9. $3x^2 = 24x + 6$

10. $3x^2 = -9x - 6$

11. $x^2 = 7x$

12. $6x^2 - 12x + 3 = 0$